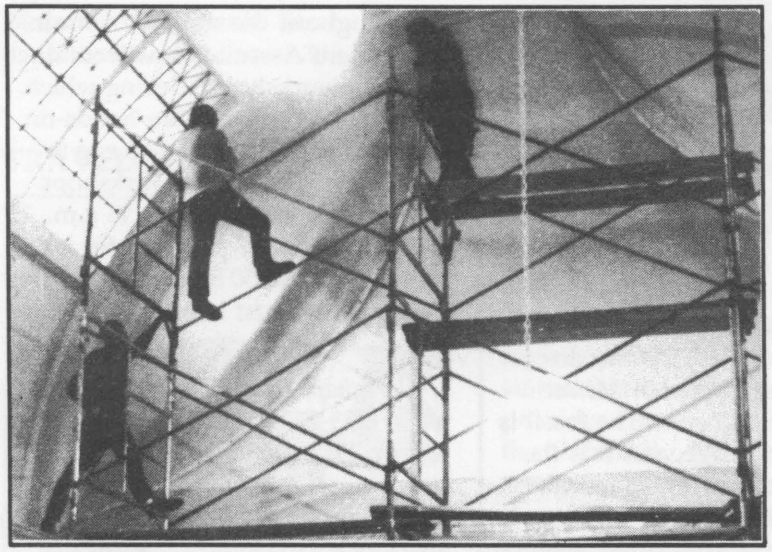
MUSEUM OF NATURAL HISTORY

University of Illinois • 1301 West Green Street • Urbana • Illinois • 61801

Volume 2, Number 2 *January 1992*

Coming Events



Fitting the Museum's new mural into the arch of the third floor gallery.

DEDICATION NIGHT

The Museum is developing exhibits and programs designed to serve a broader range of interests (see Newsletter v. 2, no. 1). The first results will be dedicated sometime in late February or March. A centerpiece of the new displays will be a large mural illustrating the formation of the solar system. In commemoration of the event, Dr. James Kaler of the Astronomy Department will give a popular lecture on the origin of the universe, our solar system, and Earth.

The Museum's other primary dedication will be its *Living Room*, under the supervision of one of our volunteers, Dr. Olga Jarrett. The *Living Room* will feature science experiments and specimens to touch and study. In addition, new displays on geology and biology are planned. Watch for details later this winter, and plan to join in the festivities!

DINO DAY

We will offer our popular Dino Day program on Saturday, March 21, for children ages 6-9. Participants will hear dinosaur stories, see dinosaur videos, dig for fossils, have a close-up look at real dinosaur bones, make a dinosaur craft to take home, eat a dinosaur snack and basically learn more about their favorite creatures. Two half-day sessions will be held: 9 a.m.-noon and 1-4 p.m. The fee is $3 for members' children, $5 for nonmembers'. Space is limited to 30 children per session. Phone 333-2517 and please register by March 16.

BLACK HISTORY MONTH EVENTS & EXHIBIT

The Museum will celebrate Black History Month this February with performances, lectures and an exhibit to highlight the diversity and richness of African culture. At 7 p.m. on Friday, February 7, in the Museum's third floor gallery, the Phi Beta Sigma Fraternity will perform a step dance — an African-American tradition. On Saturday, February 8, at 2 p.m., a performing group from the local Boy's Club will do traditional African dances, also in the third floor gallery.

African masks and rituals will be among topics covered in lectures. A display of original artwork and a temporary exhibit focusing on the influence of natural history on the artifacts of various regions of Africa are also planned.

Assistant Development Officers Kayleen Hernandez and Deanna Lovell and Curator Joanne Kluessendorf are still finalizing arrangements for these events, and they were able to secure $200 from the Celebration Office to cover some expenses. Watch for notices on campus bulletin boards and local newspapers for more information, or phone 333-2517.

SPRING FIELD TRIP

The Museum's Spring Field Trip will visit Indiana's Kentland Astrobleme and Iroquois County Recreation Area.

The Kentland Astrobleme is an exposed meteoritic impact site with highly-displaced rocks exposed in impressive excavations. Visitors may collect shatter cones, which were produced by the shock of a meteorite striking Earth.

We will also see a significant sequence of early Paleozoic rocks and specimens of Precambrian —

Continued on p. 6.

NEW EXHIBITS

Muscling a block of brachiopods to the Museum.

Block of brachiopods • In October, Curator Joanne Kluessendorf and Research Associate Donald Mikulic, both geologists, led a small group of Museum Friends on a field trip to the ca. 425 million-year-old reef that provides the stone at the Material Service Corporation quarry at Thornton, Illinois.

The tour group collected a massive specimen packed with brachiopod fossils. Rolling the 200-pound block down a blast pile, and hoisting it by hand into the truck added a new dimension to the tour experience. The specimen is a fine addition to our fossil exhibit. Come, touch a piece of ancient Illinois.

New fossil cephalopod • Sheldon Smith of Westville, Illinois, donated a large specimen of *Metaceras* sp. to the Museum. The fossil is Pennsylvanian in age, and it is the first such specimen Smith recalls seeing in his 22 years at the Fairmount, Illinois quarry. It will soon be displayed with the Museum's other Pennsylvanian marine fossils.

Tukuna of the Amazon • April 16-August 8, the Museum will display half of a two-part exhibit on the Tukuna of Colombia, focusing on this people's culture and environment. The other half will be mounted at the Krannert Art Museum: a display of Tukuna barkcloth and masks.

SPRING PROGRAMS

Teacher Orientation • Urbana and Champaign teachers have been invited to spend their February in-service days with the Museum's interpretive and curatorial staff as part of our expanding education efforts. Not only will the sessions let teachers know what the Museum has to offer, but they will solicit teachers' concerns about how to use those offerings and how the Museum can better serve their students!

Extramural Course • Museum curators will lead a six-week extramural course on the Museum this spring. They will discuss the Museum as it is and plans for the future, exhibit development, special programs and similarities among all natural history museums. The course will tour "back-room" areas and talk about collection development.

For more information, phone Extramural Programs, 333-3060.

EGG DECORATING

Vera Samycia will visit the Museum on Sunday, March 29 at 1-4 p.m. to demonstrate the art of *pysanky*, traditional Ukrainian egg decorating. Samycia's egg art has been displayed at the Art Institute and the Ukrainian Museum in Chicago. Many examples will be shown during the demonstration, and some will be available for purchase.

Throughout the day, the Ukrainian Student Association will conduct pysanky workshops , during which participants will receive hands-on instruction in decorating an egg to take home. Hour-long workshops will be held from 10 a.m., 11 a.m., 1 p.m., 2 p.m. and 3 p.m. The fee is $5 for members, $7.50 for non–members. Participants must be at least 8 years old.

Workshop space is limited, so phone 333-2517, and register by March 23.

The Museum Shop will be selling pysanky kits and separate packets of dye and beeswax for those who would like to try their hand at this intricate art. Beautifully-decorated eggs will be available, too.

MUSEUM SHOP EXPANSION

The Museum Shop will expand when the *Living Room* is established this Spring. Most of its merchandise will be moved from hall cases and into the Shop.

The Museum Shop's stock includes many unusual items selected not only for their appeal but also to convey understanding of the natural world. Included are more than two dozen T-shirt designs, a wide variety of nature and ethnic music cassettes, a diversity of dinosaurs and an abundance of beautiful ethnic jewelry.

The Shop is nonprofit. Proceeds help sponsor Museum programs. The Museum is staffed by volunteer and work-study students.

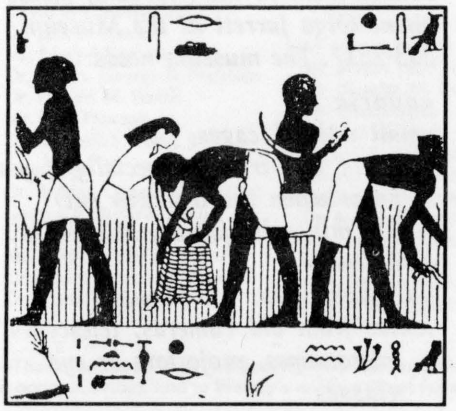
News

AUDUBON VISIT

Local members of the Audubon Society visited the Museum on Saturday morning, December 9. Members heard a little about future plans for the Museum and visited the collections — an enjoyable visit for all.

If you are a member of some organization that would like to tour the Museum, phone us at 333-2517.

TRAVELOG



Part of an Egyptian tomb wall painting in Curator Doug Brewer's research.

Egypt • This spring, Curator Douglas Brewer will be conducting research on ancient agriculture and early civilization in Egypt. The first season (January-March) will be dedicated to studying Old Kingdom tomb scenes at the Saqqara pyramid complex, and the second will be devoted to continuing excavations at the Nile Delta site of Mendes.

Argentina • Curator Ralph Langenheim trekked to Argentina last fall for the Congress of Carboniferous and Permian Stratigraphy and Geology. He participated in two field trips to the western Andean region of San Juan and Mendoza provinces, and presented a paper on how Carboniferous glaciation in southern continents is reflected in ancient limestone in Nevada.

Wisconsin • Curator Charles Keller was part of a group of international scholars invited to a conference titled "Critical Problems and Research Frontiers" during the joint meetings of the History of Science Society and the Society for the History of Technology held in Madison, Wisconsin last October.

Following the conference in Madison, Keller traveled to the Fort Snelling History Center in Minneapolis, where he participated in a workshop on 19th-century tool forging techniques for open-air museum blacksmiths.

STUDENT FRIENDS

The Student Friends of the Museum of Natural History was granted registered student organization status this fall, a designation that provides certain privileges within the University. Officers of the group are Kayleen Hernandez, president, Deanna Lovell, vice-president, and Debra Hettinger, treasurer.

Student Friends play an important role at the Museum, especially by volunteering at special events, helping with program production and promotion and providing financial support. Among their efforts this fall, the Student Friends carved 24 jack o'lanterns, decorated the galleries, acted as guides for the Halloween Hall of Horrors, helped staff the Museum Bazaar, operated a booth at the Illini Union Shop, and distributed flyers for Museum events.

The Student Friends group is a great place to meet interesting people, learn new skills and help support Museum functions. Encourage other students to join, and if you're already a member of the Student Friends group, get involved. Members are entitled to a 10% discount in the Museum Shop as well as other privileges of membership.

Phone Kayleen, Deanna or Debra at 244-3182 for information.

COLLECTIONS GET A BOOST

The Museum's expanding collections curation and management program now includes a collaborative curatorial program with the Civil Engineering Research Laboratory in Champaign and new support from the University of Illinois Research Board.

We have hired additional graduate-curatorial staff to work with the collections and to continue computer entry of collection records. Data entry for the herpetology collection is complete, and mammals are approaching completion. This spring, with additional staff, the Museum plans to begin work on the anthropology and mollusc collections.

MUSEUM EDUCATION

Students in Curator Charles Keller's Anthropology 391 "Topics in Museum Studies" and interns supervised by Keller and Curator Chuck Stout, have participated in a number of projects this semester. In addition to reading about exhibits and the history, purposes and organization of museums, they have had hands-on experience in rearranging the *Ancient Midwestern Lifeways* and the *Indigenous Peoples of the Southwestern United States* exhibits; helped in the restoration of plaster fossil casts to be mounted in the Natural History Building's second floor hallways in the next few months; worked with mammal and mollusk collections; participated in the conservation of the Museum Crockerland faunal material; and installed UV filters on light fixtures.

Volunteer Myer Rosenfield is completing a draft of the Museum's first docent program manual. It will be used in the Museum's revamped education programs, which will include a docent corps.

The Museum Shop

for a
unique & exciting
selection of
ethnic crafts & jewelry,
nature & science items,
and much, much more

Monday-Saturday 9 a.m.-5 p.m.
Sunday 2-5 p.m.
319 Natural History Building

Watch for Monthly Specials

INVERTEBRATE MODELS

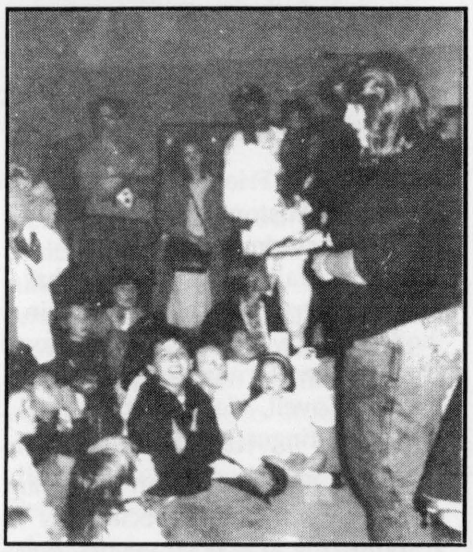
Preparations of the Blaschka glass invertebrate models for display are underway. David Whitehead, Director of the Corning Glass Museum in New York, will present a public lecture on the Blaschkas, one of his research specialties, when the new exhibit opens at a date to be announced.

Museum friend Rachel Dial has volunteered to undertake the meticulous job of cleaning the models. She is learning proper cleaning techniques from the Corning Museum's glass conservator. Museum development volunteer Leslie Wyggert is adding her efforts in seeking corporate funding to sponsor the new exhibit.

FALL REVIEW

The Museum's fall events got off to a great start with *Living Dragons*, a lecture by J. Marie Lutz. Fascinating facts and photos of the Komodo dragon of Indonesia were presented. Next, the Museum celebrated Illinois Archaeology Awareness Week with the exhibit, *Illinois Archaeology at the University of Illinois*, and a lecture by Kevin McGowan on changing archaeological methods and interpretation in Illinois archaeology.

Over 250 visitors were guided through a jack o'lantern-lit Halloween *Hall of Horrors* by student volunteers from the Circle K Kiwanis organization and the Student Friends of the Museum of Natural History. Visitors were treated to a wonderful program on snakes, spiders and other 'creepy crawlies' by student volunteer Ruth Rosenberg. Kayleen Hernandez, Deanna Lovell, Suzanne Costanza, Debra Hettinger and Ruth Rosenberg were important to making this program a success.



Halloween gathering for the *Hall of Horrors*.

The Museum's field trip to Cahokia and the American Bottom visited the new interpretive center, an impressive arrangement of new exhibits and artifacts from the Cahokia site and vicinity. Curator Chuck Stout led the tour of the large architectural features of "Woodhenge" and Monks Mound. From the top of the Monks Mound, Curator Ralph Langenheim gave a panoramic tour of American Bottom geology.

Our last fall event commemorated the 150th anniversary of dinosaurs with an entertaining and informative slide-filled lecture entitled *Victorian Monsters: The Early History of Dinosaur Studies* by Donald Mikulic. Following the lecture, our guests sampled the delicious dinosaur birthday cake at the opening of our temporary exhibit *Mr. Owen's Old Bones: 150 Years of Dinosaurs*. All in all, our fall events program was a resounding success, and the Museum is looking forward to an equally exciting spring schedule.

WISH LIST

The Museum is developing its Living Room, *the hands-on discovery area. The museum needs items for new exhibits, and specimens that can be donated to school groups to stimulate development of classroom collections. If you have any of the following "lying around," and would like to donate them to the Museum, please phone Olga Jarrett at the Museum, 333-2517. The museum needs:*

aquaria
small animal cages
slices of tree trunk (especially if you know when the tree was cut)
rocks, minerals, fossils, sea shells
birds' nests
kaleidoscopes
lenses from old cameras, telescopes, microscopes, projectors or eye glasses
"science toys" — gyroscopes, slinkies, wind-up toys, tops, legos (especially those with gears)
bathroom scales
weather instruments that work
old musical instruments (cheap ones)
record players
cassette recorders
slide or filmstrip projectors
computer
house plants
small flower pots
two-liter plastic pop bottles (the kind with dark plastic bottoms)

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Mrs. Ruth K. Youngerman
Ms. Amy E. Ziegler
Ms. Marie Zimmerman

—Thanks to Bruce, Beth and Scott at the Philo Road Osco Drugs for donating display stands. The *Living Room* gives special thanks to Erber's Camera Shop for lenses to use in optics activities, and to Wendy's on Race Street for mechanical toys to use in 'Science from Toys' hands-on displays.

Yes, renew my membership in the Friends of Museum of Natural History

☐ Benefactor $1,000
☐ Patron $500
☐ Sponsor $100
☐ Sustaining $50
☐ Family $30
☐ Individual $15

UIF/MNH Friends
Make checks payable to :
Mail check to: *The Museum of Natural History, 438 NHB, 1301 W. Green St., Urbana, IL 61801*
Amount enclosed: $_____

Name: _____

Address: _____

_____

_____

Phone: (_____)- _____-_____

Sign me up for Dino Day, March 21 — see p. 2 for details
Number of members attending __ x $3.00 ____
Number of non-members attending: __ x $5.00 ____
Time (circle): 9 a.m. 1 p.m.

Sign me up for the Egg Decorating Workshop, March 29 — see p. 2 for details
Number of members attending __ x $5.00 ____
Number of non-members attending: __ x $7.50 ____
Preferred time (circle):
10 a.m. 11 a.m. 1 p.m. 2 p.m. 3 p.m.

Sign me up for the Spring Field Trip to the Kentland Astrobleme & Iroquois County Recreation Area, Saturday, May 2 —see p. 6 for details
Number of members attending __ x $25 ____
Number of non-members attending: __ x $30 ____

Amount enclosed: $_____

Make checks payable to : *The University of Illinois*
Mail check to: *The Museum of Natural History, 438 NHB, 1301 W. Green St., Urbana, IL 61801*

Name: _____

Address: _____

_____

Phone: (_____)- _____-_____

SPRING FIELD TRIP
(continued from p. 1.)

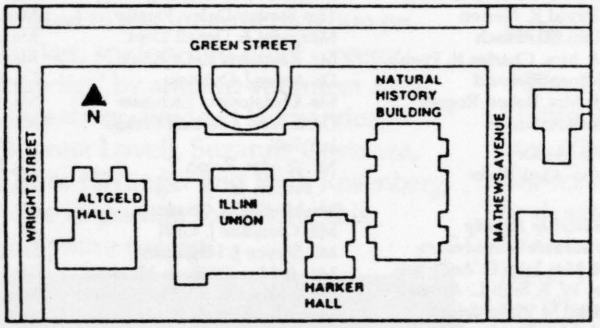
tillite that were carried into the area by continental glaciers.

The tour will arrive at the astrobleme around 9 a.m. for a conducted tour of the quarry. The afternoon will be spent viewing the spring plants and animals in the Iroquois County Conservation Area.

Lunch is covered by your fees. We expect to return to Urbana by 6 p.m. Rugged clothing, including sturdy walking shoes, is recommended. Registration is $25 for members and $30 for nonmembers. To reserve a place, send your check, made out to the University of Illinois, to the Museum of Natural History, 438 NHB, 1301 West Green Street, Urbana, Illinois 61801. Checks must be received no later than 4 p.m. Monday, April 27.

Reserve your place for the Museum's Spring Field trip to the Kentland Astrobleme and the Iroquois County Recreation Area. Phone 333-2517 for more information. Registration form on bottom of p. 5.

Visiting from Out of Town



The Museum of Natural History is in the Natural History Building at 1301 West Green Street, Urbana, on the campus of the University of Illinois at Urbana-Champaign, between the Illini Union and Wesley First Methodist Church. Our main display halls are on the 3rd and 4th floors, with additional displays in the corridors. The *Living Room*, an interactive display for children of all ages, and Museum Shop are located near the 3rd floor entrance.

The Museum is open 9 a.m. to 5 p.m. Monday-Saturday and 2-5 p.m. Sunday, except official University holidays. Appointments for groups should be made in advance by calling 217-333-2517. Admission is free.

When coming from out of town, exit Interstate 74 at Lincoln Avenue, go south to Green Street, then go west on Green Street to Mathews Avenue. Metered parking is available on Mathews Avenue and in front of the Natural History Building. Metered parking is also available in a municipal lot near the corner of Green and Sixth Streets, just west of the Museum in Champaign and beneath Krannert Center for the Performing Arts (enter the lower level ramp from Illinois Street). Parking is free on Sundays.

Museum of Natural History
University of Illinois
438 Natural History Building
1301 West Green Street
Urbana, Illinois 61801

Non-Profit Organization
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Daniel Blake

Curators
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MUSEUM OF NATURAL HISTORY

COLLEGE OF LIBERAL ARTS & SCIENCES • UNIVERSITY OF ILLINOIS

Volume 3, Number 1 *November 1994*

Expeditions to the Real Jurassic Park

by Steve Sroka and Russ Jacobson

During August of the past two summers, Russ Jacobson (Illinois State Geological Survey) and Steve Sroka (U. of I. Museum of Natural History) have led a group of approximately 12 participants to excavate dinosaurs from Jurassic rocks (approximately 150 millions years old). The site is in a roadcut along I-90 near Sundance, Wyoming, in the beautiful northern Black Hills. Field work primarily included the excavation, collection, and documentation of dinsosaurs in interbedded siltstones and mudstones of the Morrison Formation. The Morrison is of Upper Jurassic age and is one of the major dinosaur-bearing units in the western United States.

Participants in the excavation are unearthing a sauropod, a long-necked plant eater.

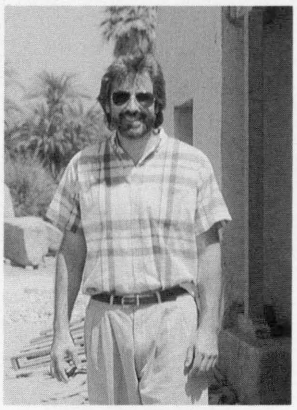
The site was originally discovered by John Foster of the South Dakota School of Mines and Technology in 1991, and the Museum of Natural History has been a co-participant with the Museum of Geology (South Dakota School of Mines and Technology) since year two of the discovery. The fossil material from the quarry is generally well-preserved, offering scattered isolated elements as well as articulated individuals. Most of the remains of dinosaurs belong to a group of long-necked plant eaters called sauropods, with at least three genera (*Camarosaurus*, *Apatosaurus*, and *Diplodocus*) represented. The most common dinosaur at the site is the sauropod *Camarosaurus*, and this year a sacrum weighing over 5 tons was removed. Other dinosaurs at the site include isolated remains of carnivores (*Allosaurus* and others), which seemed to be favorites of many expedition participants, and hypsilophodontids. Other fossil remains include mammals, lizards, turtles, crocodylians, fish, snails, clams, and isolated plants.

The vertebrate fossils that caused the most sensation were the mammals. These mammal remains, first discovered by our participants, are extremely small and consist primarily of teeth and jaws.

Participants in the trips came from many places, including central and northern Illinois, New York, Texas, New Mexico, and England. Everyone stayed in a rustic log mansion once owned by Moses Annenberg, a 1930s publishing tycoon from the Chicago area. One highlight from this year's trip was the viewing of a spectacular meteor shower during the last several nights of our stay in the Black Hills of eastern Wyoming.

In addition to providing a glimpse of life on the Upper Jurassic plains, this site has generated several other significant finds, including the first Jurassic mammals of the Black Hills. It also appears to be the best Morrison dinosaur site yet in the Black Hills, with a prolific vertebrate fauna being recorded from our collected material.

From the Director



Douglas Brewer

During the past several years Dan Blake and I shared the responsibility of bringing the Museum of Natural History through some very difficult financial times. We are proud to announce that the Museum survived the proposed budget cuts and will be an intact and functioning unit within the college and University. As well, the Museum will be the new home for the *Journal of Paleontology*, and Dan Blake will be managing editor. To accommodate this undertaking, I have agreed to be the Museum director. I have had long interest in museums, having begun my work as an undergraduate student in the Burke Museum, University of Washington, Seattle, followed by graduate work at the McClung Museum, University of Tennessee. I originally came to the University of Illinois Natural History Museum in 1986, and served as a curator, and later was the associate director.

Over the past three years our staff has been working behind the scenes to upgrade the status of our nationally-ranked collections. We have completed work, or nearly so, on the herpetology, mammalogy and bird collections. The biggest task remaining is upgrading our large collection of freshwater mollusks. This year we will submit a proposal that, if funded, will help financially support our efforts on the mollusk collection. Also, within the confines of our budget, we plan to focus on the exhibits. Our first priority is to reorganize existing exhibits to provide a more thematic presentation. While reorganizing the exhibits, many will be repaired and their contents updated to reflect more recent research. As director, I will be seeking cooperation with interested departments on campus in the hope of building mutually beneficial agreements that will serve to enhance both the Museum and the individual departments. The ultimate goal is to coordinate future Museum activities and exhibits to better reflect the current research of our affiliated departments and provide our Friends with a greater opportunity to hear, see and meet members of the University community involved in researching subjects within the larger sphere of Natural History.

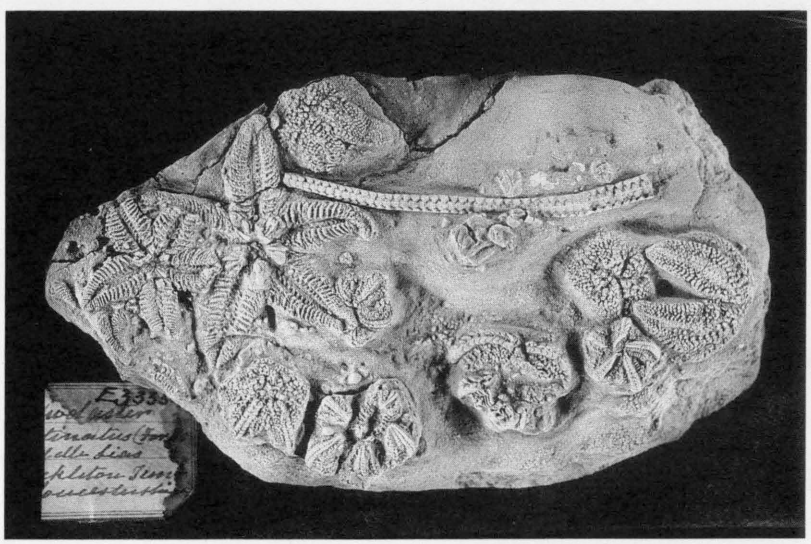
Although our budget and staff remains modest, we are committed to improving the Museum and becoming reacquainted with our Friends.

Blake to Edit Journal of Paleontology

Associate Director Daniel Blake assumed responsibilities as managing editor of the *Journal of Paleontology* this fall during the Geological Society of America meetings in Seattle. He will be assisted by both Director Douglas Brewer and Curator Emeritus Ralph L. Langenheim, Jr. The journal is one of the major paleontological publications in the world, and its presence in the Museum will help bring the Museum of Natural History to the attention of an international audience.

The *Journal of Paleontology* publishes six regular issues each year, with about 125 scientific papers totaling about 1,250 pages of text and illustrations. In addition, about two to six memoirs are issued each year; memoirs average about 25 pages in length.

Blake also received a grant from the National Science Foundation to return to Seymour Island in Antarctica to continue his research there on fossil echinoderms (e.g., starfish). He will make the trip in December and January (the Austral summer) with his colleague, Dr. Richard Aronson of the Dauphine Marine Laboratory in Alabama. The island contains a uniquely rich fauna of Eocene fossils (well over 300 species of mollusks have already been described) that allow researchers to develop a variety of questions in paleobiology and also on plate tectonics and the geologic history of the southern part of the world. As a first project, Blake and Aronson will study the role of predation on the fossil brittle stars. Perhaps surprisingly, predation events are recorded as damage to the brittle stars, and through geologic time, predation increased in intensity. Biologically stressed high latitude faunas, such as those at Seymour Island, appear to have been less susceptible to predation (as were more ancient faunas), and Blake and Aronson will study this question, seeking to develop ideas on the history of predation through geologic time.

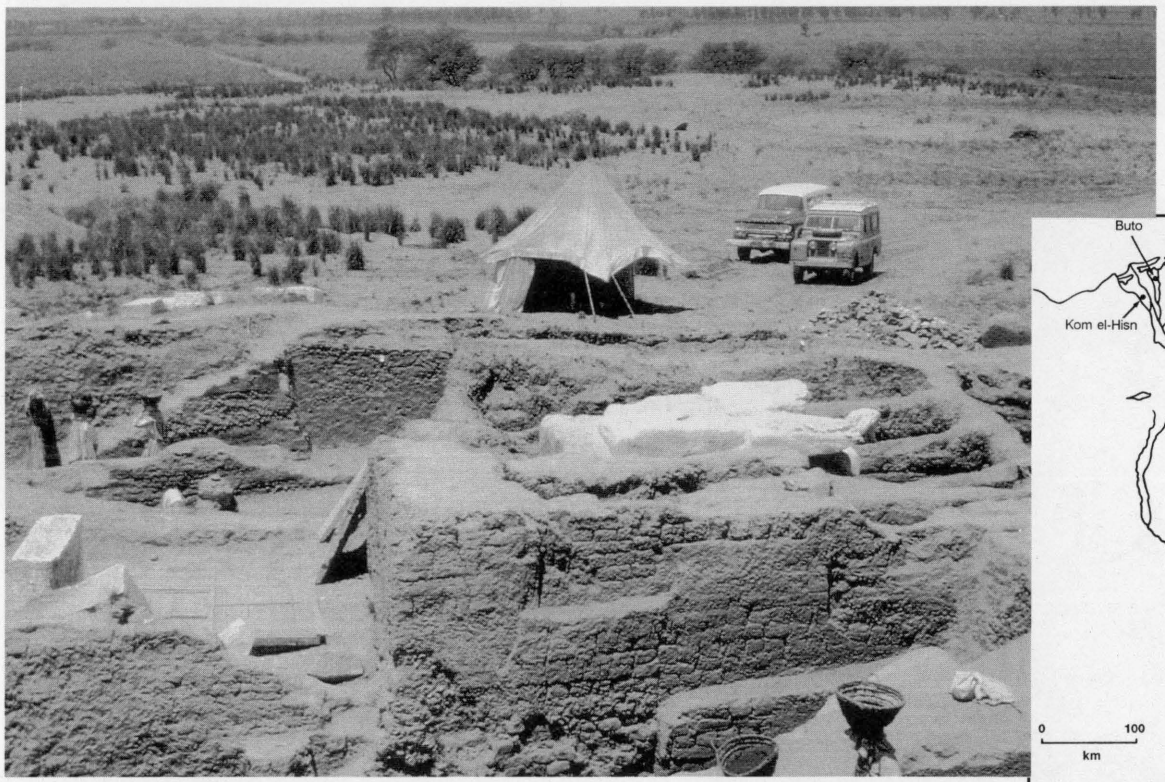


Jurassic starfish from England.

Research in Egypt Continues

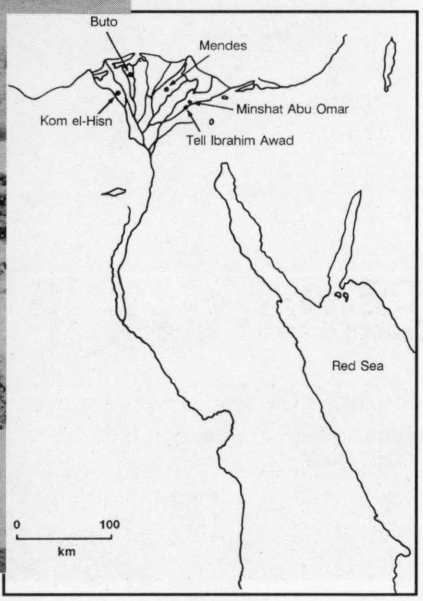
Director Douglas Brewer and Curator Ann Hutflies spent the summer analyzing pottery from the Egyptian delta site of Mendes. The analysis was undertaken as part of the Mendes Project's goal to research the earliest evidence of community life in Ancient Egypt.

The National Geographic Society is funding next summer's exploration activities which will be a survey designed to locate other early sites and sites contemporary to Mendes, which was occupied from at least 3500 BC to 32 BC. However, rather than slog through delta marshes and rice paddies, Brewer and his colleagues are attempting to locate sites through satellite SPOT imagery. SPOT imagery uses the reflective properties of different light band frequencies to detect different types of earth surfaces. With the aid of a computer, agricultural fields, villages and archaeological sites can be identified. This summer the archaeological team plans to assess the accuracy of the computer-generated site localities and test some of the sites to determine their age, duration of occupation and relationship to other known sites in the area. It is hoped that this season's work will not only locate early sites suitable for excavation, but also will help refine the satellite-based survey system so that it can be used in other parts of the delta and the Sinai.



Excavation of a 5th Dynasty tomb at Mendes.

Mendes in relation to other important sites.



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"Lucky Mo" Uncovered

by Russ Jacobson and Steve Sroka

In the foreground is the jaw section of the mosasaur, "Lucky Mo."

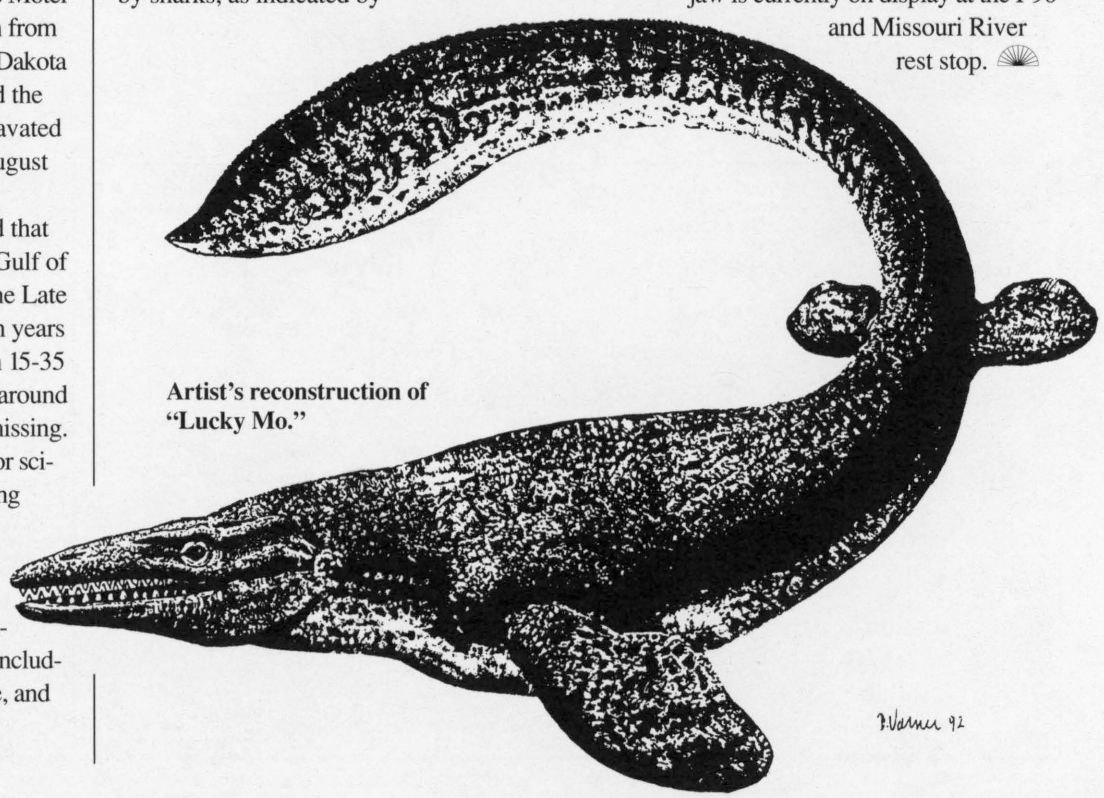
In May of 1992, Steve Sroka and Russ Jacobson discovered the fossilized remains of a mosasaur, nicknamed Lucky Mo, in a roadcut of the Pierre Shale along the I-90 business loop at Chamberlain, South Dakota. The two scientists had stopped along the roadway while looking for the Super 8 Motel in Chamberlain. Together with a team from the Museum of Geology at the South Dakota School of Mines and Technology and the New Jersey State Museum, they excavated the specimen during the period of August 9-22, 1992.

The mosasaur was a marine lizard that swam in a seaway that ran from the Gulf of Mexico to the Arctic Circle during the Late Cretaceous, approximately 77 million years ago. Typically, mosasaurs range from 15-35 feet in length, but this specimen was around 12-15 feet, with only the tail section missing. The specimen turned out to be of major scientific importance to specialists studying mosasaurs. Previous specimens of this particular species (*Mosasaurus conodon*) are missing a number of key skeletal elements. This specimen contains many of these missing elements, including the bone that connects the tongue, and is extremely well-preserved.

Preliminary investigations have revealed that Lucky Mo survived a frontal attack by another mosasaur during its life span, but died by nearly having its head bitten off by even a larger mosasaur. In addition, the carcass or dying Lucky Mo was being eaten by sharks, as indicated by hundreds of shark teeth surrounding the skeleton.

From the time of the discovery through the excavation, Jacobson and Sroka were greeted by a spectacular welcoming committee from the town of Chamberlain. The delegation seemed to cover everything, from helping to obtain permissions, to bringing lemonade and cookies to the site and supplying a few evening barbecues. This new found friendship continues today, and the scientists look forward to visits with the people of Chamberlain and thank them for their hospitality.

The discovery and excavation received significant media attention by many South Dakota newspapers, TV and radio stations. As a result, many visitors came by to view the scientists at work excavating, providing a major opportunity for public geoscience education. A feature in the *Champaign-Urbana News-Gazette* detailed the discovery to the public in Illinois. The specimen is housed in the Museum of Geology at the South Dakota School of Mines and Technology, where it is still being prepared and studied. Eventually the specimen will reside at a new museum being planned at Chamberlain. A cast of the jaw is currently on display at the I-90 and Missouri River rest stop.



Artist's reconstruction of "Lucky Mo."

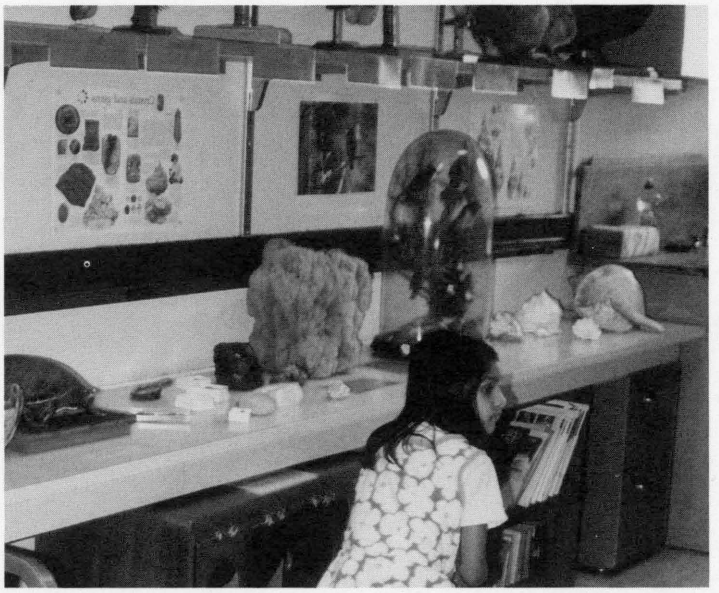
The Discovery Room

On January 21, 1994 the University of Illinois Museum of Natural History opened the doors of its new Discovery Room to the public. Since then, over 900 visitors have spent time in the room examining, exploring and learning about natural history.

This exhibit, located in room 433 Natural History Building, is a place for hands-on, interactive learning and is designed to complement the traditional displays found elsewhere in the Museum. Visitors to the Discovery Room are encouraged to use all of their senses and their imagination in exploring the various displays and activity boxes. Particularly popular with school groups, the room is also ideal for families. The Discovery Room is handicapped accessible, and people with special needs are encouraged to visit.

The room is staffed by volunteers from the student body and the community. Last year, 12 university students participated as museum docents in the Discovery Room. All of them enjoyed working with the public, and several who were interested in museum careers viewed their experience as an excellent learning opportunity for themselves. This year, the room is managed by Christine Healy, a senior majoring in anthropology who is interested in museum education. In addition to several returning docents, 18 new docents have completed training and will be staffing the Discovery Room this semester.

The Discovery Room is open Monday through Saturday. Hours of operation are determined by the availability of volunteers; specific hours for each day of the week may be ascertained by calling the Discovery Room at 333-1361. Visitors are welcome to walk in; however advance appointments for groups larger than 10 persons is requested. Appointments may be made by calling 333-1361.



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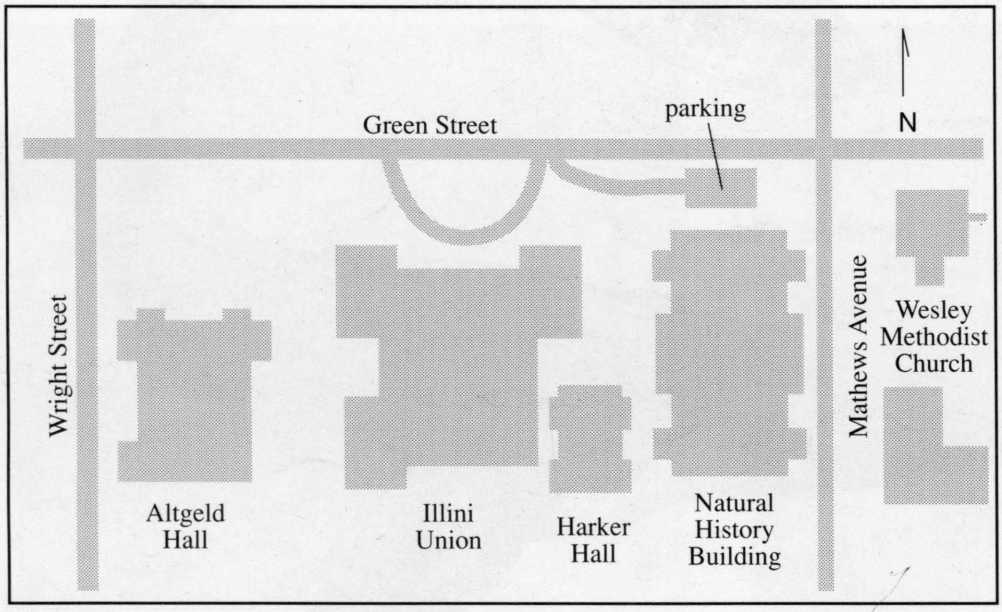
Visiting the Museum of Natural History



The Museum of Natural History is located in the Natural History Building at 1301 West Green Street, Urbana, on the campus of the University of Illinois, between the Illini Union and Wesley Methodist Church. The Museum's main display halls are on the third and fourth floors, with additional displays in the corridors. The Discovery Room, an interactive display for children of all ages, is on the fourth floor.

The Museum is open 9:00 a.m. to 4:00 p.m. Monday through Saturday, and closed Sunday and official University holidays. Appointments for groups should be made at least one week in advance by calling 217-333-2517. Admission is free.

When coming from out of town, exit Interstate 74 at Lincoln Avenue, and follow Lincoln south to Green Street. Turn right on Green, and follow it westward to Mathews Avenue. Metered parking is available off Green Street in front of the Natural History Building, on Mathews Avenue, and beneath nearby Krannert Center for the Performing Arts (enter the lower level ramp from Illinois Street). Parking is free on Sunday.

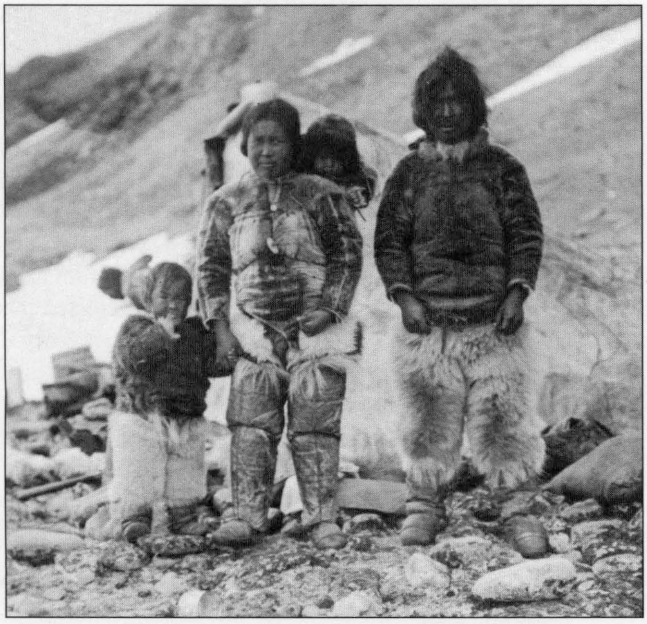
MUSEUM OF NATURAL HISTORY

COLLEGE OF LIBERAL ARTS & SCIENCES • UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Volume 3, Number 2 *Summer 1995*

New Exhibition Installed in Hall of Anthropology

by Ann Hutflies



A photograph from the new Crocker Land exhibition in Fourth Floor Gallery.

The Museum of Natural History's Fourth Floor Gallery is now the home for a major permanent installation. The exhibition, entitled "The Crocker Land Expedition: Life in Arctic Greenland, 1913-1917," makes use of rare photographs and artifacts from the Museum's own collection.

Sponsored by the American Museum of Natural History, the American Geographical Society and the University of Illinois, the expedition's primary goal was to find and explore "Crocker Land," a land mass predicted by oceanographers and 'sighted' by Rear Admiral Peary in 1906. Although the expedition failed to locate any such land mass (Peary's sightings had been a mirage), its research accomplishments expanded knowledge of the flora, fauna, geology, meteorology and oceanography of the little-known Arctic region. In addition—and perhaps more importantly—the expedition's journals, photographs and collected artifacts provide us a glimpse/view of traditional Inuit culture, a way of life that has now all but disappeared.

Graduate Curator Ann Hutflies hangs a picture for the Crocker Land Exhibition.

Organized by graduate curators **Ann Hutflies** and **Richard VanderHoek**, the Crocker Land exhibition is an expanded version of a previous MNH photographic exhibition. The new exhibition, however, complements photographs with artifacts and text to give a well-rounded view of early 20th century Inuit life. The Museum of Natural History is one of only three institutions that own material from the Crocker Land Expedition.

Inuit Technology

by Richard VanderHoek

The Museum of Natural History is fortunate to have the Inuit (Eskimo) cultural materials from the Crocker Land Expedition to display with photographs as part of the Museum's new exhibit. These items of clothing, tools and decorations complement the photos in illustrating how ingenious human populations have been in dealing with incredibly severe environments like those of Northern Greenland.

An ivory open socket harpoon for hunting walrus from the display of sea mammal hunting technology in the Crocker Land Exhibit.

I find these items of special interest, in part because in the early 1980s I spent a winter in Point Barrow, Alaska, and had the opportunity to go out in a boat with a native friend to hunt for seal. While the hunter I was with did use a harpoon to secure the animal, he also used an aluminum boat with outboard motor and hunted with a rifle—not the kayak, throwing board and lance of the Greenland Inuit of the early 1900s.

One point highlighted in the new exhibit's sea mammal hunting display is how clever Inuits were in crafting weapons in an environment with little wood. One picture shows a hunter holding a large harpoon with a wooden midsection and front and back sections that look like foot-long pieces of dowel spliced together. These round rods are called "oosiks" and are the bacculi, or penis bones, of walrus.

—continued inside

From the Director

I am very pleased to report that the Museum of Natural History staff has put the financially related woes of the past decade behind us, and all indications are that we can expect to be around for years to come. On the heels of this news has come a great deal activity: the Museum has undergone a facelift of considerable proportion during the past six months. In order to provide a more parsimonious presentation of themes related to earth history, all the Museum's geology/paleontology exhibits have been moved to the second floor, and a new mineralogy exhibit was added to serve as a teaching aid for introductory geology courses. Thanks goes to the geology graduate students who initiated, designed and constructed the new exhibit.

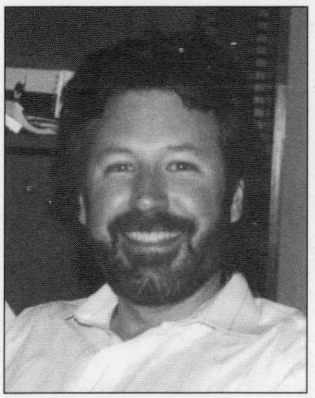
New Exhibitions

The fourth floor galleries—now devoted to anthropology exhibitions—will host three new exhibits: "The World of Etah," an ethnographic exhibition of turn-of-the-century photographs and artifacts recovered from a U. of I.-supported expedition to the Arctic, is already in place; a display dealing with Native American horticulture will be completed by summer's end; and an exhibition of ancient to modern fabrics will be completed in the fall as part of a new course offering in museum studies. The Museum also hosted two lectures in late autumn, one by the eminent entomologist Professor May Berenbaum, and the second by anthropologists Richard and Sally Price.

Given all that the Museum has achieved this past year, it is appropriate at this time to thank graduate curators Steven Sroka, Ann Hutflies and Richard VanderHoek, and Discovery Room manager Christine Healy for dedication to the Museum that often went far and above the call of duty. Because of their dedication we were able to accomplish much during the academic year.

Upgraded Exhibitions

While there have been many obvious changes in the Museum this year, there are equally important, but more subtle changes as well. Behind the scenes the staff has continued to improve the conditions of our collections for the professional visitor. Dr. Ed Heske of the Natural History Survey is donating time this summer to our curatorial efforts on the mammal collections and will be assisted by Dan Rosenblatt of the School of Life Sciences. At the same time our new graduate curator, John Werner, will begin work on our nationally ranked mollusk collection. Associate Director Blake continues as editor of the *Journal of Paleontology,* assisted by former graduate curator Dr. Deborah Bakken.



Douglas Brewer

Plans for the Future

Our plans for the next academic year are no less ambitious than those we set for the current year. To assist the Museum in these plans, a new board of trustees has been selected to offer advice to the director with respect to the community's needs. The Museum is particularly thankful to these individuals for donating their time to help the Museum of Natural History meet the educational challenges of the University and the community at large. Next year we hope to build a Museum Certificate Program to offer U. of I. students interested in a museum-related career the opportunity to train in a museum, emphasizing a hands-on approach. We feel that offering a program in museum studies through the Natural History Museum will give U. of I. graduates a competitive edge in today's museum job market.

Journal Adds to Museum's Stature

The *Journal of Paleontology* has become neatly integrated into the workings of the Museum of Natural History by the Museum's Associate Director Dan Blake, who is also managing editor of the journal. "The field of paleontology is a very active one," reports Blake, "and the editorial office receives a steady stream of paleontologically exciting manuscripts treating fossils of all types (from protozoans to mammals), ages (from Precambrian to Recent), and geographic areas of the Earth." The *Journal* is a valuable addition to Museum programs, because it introduces the Museum to an international professional audience.

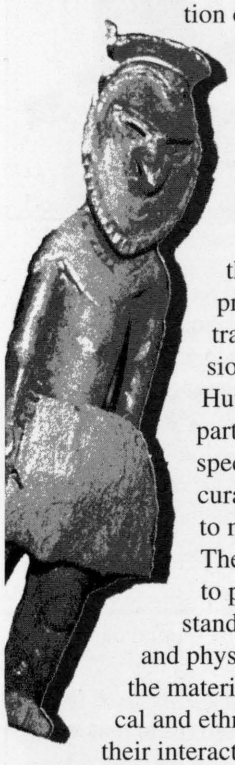
Blake is ably assisted by a post-doctoral student, Deborah Bakken, who worked as a graduate student in the Museum for several years before completing her degree in anthropology under the supervision of Doug Brewer (she studied the paleoenvironment of a fossil hominid site in China for her dissertation work). Bakken is learning how to be an editor as well as a journal manager, and along the way she is adding a broad range of paleontology to her experience with fossil humans; thus the *Journal* also provides a significant addition to the Museum's academic training program.

Inuit Technology, Cont'd

These very dense bones, beveled and lashed together, make a reasonable substitute for a hardwood shaft.

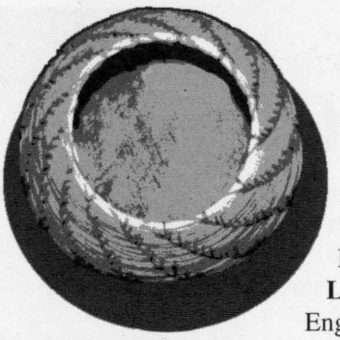
The new exhibit displays two short harpoons, called "throwing board darts," that were used with a spearthrower or "throwing board" to hunt seal from a kayak. They are tipped with toggling harpoons, designed to turn sideways inside the animal when pressure is applied upon the attached line, keeping the animal from getting away before the hunter can kill it with his kayak lance. Larger prey, like walrus, were hunted with bigger harpoons with toggling points, and killed with heavier lances. The new exhibit includes a photo of walrus hunting gear, and visitors can get a close-up look at two hunting lances and a large toggling point.

Curator to Attend Conservation Training



Graduate Curator **Ann Hutflies** has received NEH funding to attend a two-week course dealing with the conservation of archaeological and ethnographic materials at the Campbell Center for Historic Preservation Studies later this summer. Although the Center primarily provides mid-career training for professional conservators, Hutflies will be participating in a special program for curatorial staff of small to mid-size museums. The course is designed to provide an understanding of the chemical and physical properties of the materials in archaeological and ethnographic objects, their interaction and the effects of environment on those materials. Class participants will thus be able to make informed decisions regarding the care of collections.

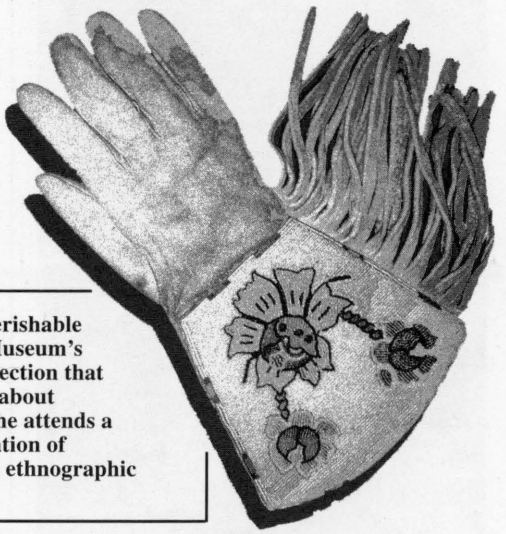
Upon Hutflies's return, she will be responsible for assessing the current condition of artifacts in the Museum's Anthropology Collection and for implementing any necessary conservation treatment. In addition, she will lead a workshop to share the information learned in the course with the rest of the Museum's curatorial staff.



University Students Help With Museum Exhibitions

by Ann Hutflies

The Museum of Natural History has benefited this year from university students interested in museum careers. **Christine Healy** (senior, anthropology) has served as the Discovery Room Manager, and under her direction the Room has had over 1,600 visitors this year. Healy plans to pursue a career in museum education. **Mario Lippy** ('94, anthropology/biology) and **Beth Watkins** (junior, history) have assisted the curators with exhibitions and collection management. This is also Watkin's second year as a Discovery Room docent; she will be the new Discovery Room manager next fall. **Lori Hazer** (senior, anthropology/English) researched and redesigned a display of Zulu decorative beadwork and assisted with the installation of the Crocker Land exhibition. She plans to pursue a museum-related career. **Jocelyn Moralde** (senior, anthropology), in addition to her work in the Discovery Room, has designed a visitor survey to evaluate the Museum's impact. She is currently applying for several museum internships that promote diversity within the museum profession. We wish them all the best of luck!



Examples of the perishable objects from the Museum's Anthropology Collection that Hutflies will learn about conserving when she attends a course on conservation of archaeological and ethnographic materials.

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Patron	500	Family	30
Sponsor	100	Individual	15

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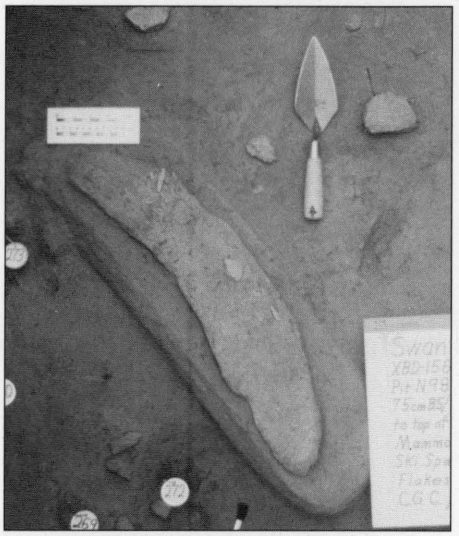
Early Footsteps South: Archaeology of the First Americans

By Richard VanderHoek

When humans first settled the Americas, they are believed by most prehistorians to have done so by crossing the "Bering Land Bridge" between Siberia and Alaska during a time when the sea level was much lower than today. Before they reached the continental U.S., they are believed to have crossed through central Alaska, following herds of migrating



A 60cm long mammoth tusk fragment from the 11,660 year occupation level at Swan Point. The round, numbered tags represent charcoal samples to be radiocarbon dated.

game. Because of these theories, scientists have expected to find sites in Alaska that are somewhat earlier than sites farther south. Recent research in central Alaska is confirming their expectations.

For the last five summers, Richard VanderHoek (U. of I. Museum of Natural History) has conducted surveys and excavated known Late Pleistocene archaeological sites along the Tanana River in central Alaska. In 1991 he and geologist Tom Dilley from the University of Arizona, working under the direction of State of Alaska archaeologist Chuck Holmes, discovered the Swan Point site in the Shaw Creek Flats, approximately 20 miles north of Delta Junction. The site sits on a 70-foot high point overlooking the flats, providing ancient hunters with both a lookout for game and a dry place to camp above the rather swampy valley bottom.

Early testing at Swan Point brought to light pieces of mammoth ivory from the lowest cultural levels, very rare in early Alaskan sites. Holmes, VanderHoek and Dilley have returned to Swan Point for the past three summers to continue their research, aided by Alaska Office of History and Archaeology interns, volunteers and University of Alaska field school students. The site has been a favorite with workers, both because of the richness of the cultural levels and the occasional sightings of wildlife like swans, moose and bear around camp.

Research has shown at least five periods of occupation, with hearths, stone tools and faunal remains from species hunted by the ancient occupants, as well as larger pieces of worked mammoth tusk. The earliest occupation level has been radiocarbon dated to 11,660 $\pm$ 60 years before present, making it one of the oldest reliably dated sites in Alaska. It has been thought that the mammoth were extinct before humans entered Alaska, and the ivory found at Swan Point was scavenged from creek banks by the early inhabitants. This could still be true, but a radiocarbon date run this fall on tusk material from Swan Point came back just over 12,000 B.P., suggesting that if mammoth were extinct before humans arrived, they had just recently left the scene.

Research will continue at Swan Point for the next two summers, adding to the tool and faunal assemblages, and hopefully including more items of worked mammoth ivory. The information gained from this work will aid researchers in better understanding the lifeways of the earliest inhabitants of the Americas, helping us more clearly see the trail of the earliest footsteps south.

A Foggy Christmas in Antarctica

How many of us would mind spending Christmas somewhere called Isla Marambio? Dan Blake, associate director of the Museum of Natural History, and his colleague Rich Aronson, of the Dauphin Island Sealab in Alabama, did just that, their second trip to the island on the Antarctic Peninsula.

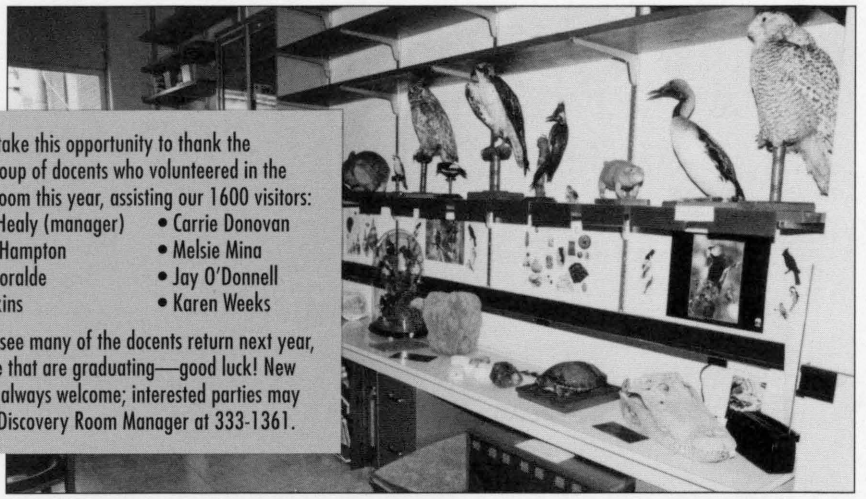
Blake and Aronson made their journey in December and January to study fossil echinoderms. They were primarily concerned with evaluating mat-like accumulations of Eocene ophiuroids (brittle stars) and crinoids (sea lilies). These accumulations were buried-as-they-lived rather than post-mortem associations, and the development of such mats seems to have declined through geologic time. The decrease seems to reflect increasing predation pressure, and the associations in Antarctica provide an important data point for evaluation of marine evolution.

Blake reports reasonably good weather, although blizzard conditions and wind gusts to 55-knots confined the field parties to camp on more than one occasion. Interestingly, perhaps a more serious problem was fog; the expedition was made in the Austral summer, and "warm" breezes vaporized ice and produced periodic thick fogs. Field parties must be alert for developing fog in order to avoid becoming lost in a rather uniform landscape with limited truly distinctive features.

But all was not work. Isla Marambio has a small Argentine air base, and the researchers spent Christmas and New Years Eve with air force personnel. The Argentines warmly welcomed their American scientific colleagues for enjoyable evenings spent dining and singing at the southern end of the world; certainly an unusual and memorable way to spend Christmas Eve! January departure from Isla Marambio was on an Argentine Air Force C-130 operating from the short dirt airstrip on the island, a schedule delayed by dense fog!

Discovery Room Update

by Christine Healy



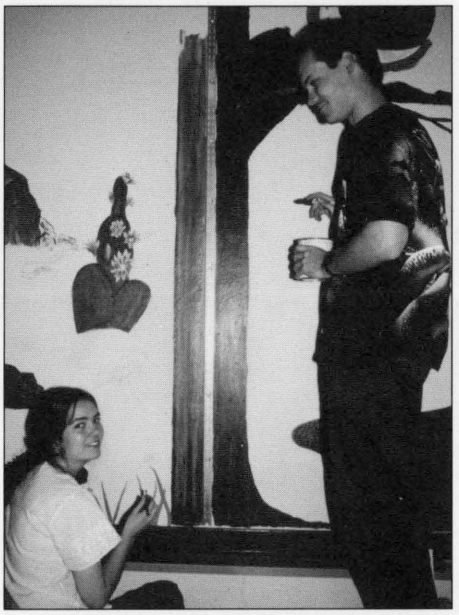
We wish to take this opportunity to thank the excellent group of docents who volunteered in the Discovery Room this year, assisting our 1600 visitors:

- Christine Healy (manager)
- Carrie Donovan
- Charlotte Hampton
- Melsie Mina
- Jocelyn Moralde
- Jay O'Donnell
- Beth Watkins
- Karen Weeks

We hope to see many of the docents return next year, and to those that are graduating—good luck! New docents are always welcome; interested parties may contact the Discovery Room Manager at 333-1361.

New Mural

The Museum's Discovery Room, the hands-on exhibition for children, is getting a face-lift. **Jay O'Donnell**, one of the student docents, outlined the plan and is supervising the actual painting of a mural. He is being assisted by **Carrie Donovan** and a few other student docents. The mural is divided into 6 panels, each depicting a different ecosystem: ocean, seashore, rain forest, savanna, desert and woodland. Each panel incorporates plants and animals native to the various habitats that are found on display elsewhere throughout the Museum. Work on the mural began in mid-March and will continue throughout the summer in order to be finished by the start of the 1995-96 school year.



Discovery Room docents Carrie Donovan and Jay O'Donnell work on the new mural.

New Manager Appointed; Museum Seeks Help to Fund Position

The Discovery Room will be getting a new manager next year; **Beth Watkins** will be replacing current manager, **Christine Healy**, who is graduating this semester. Watkins has worked in the Room since its opening two years ago and is well qualified for the demanding position. Her duties include public relations, advertising, scheduling and the supervision of volunteer docents.

Because of the time and dedication required of the DR manager, the Museum is seeking financial assistance in the amount of $3,600 to fund the half-time manager position. The Discovery Room is the Museum's main outreach program to our community's children and serves to introduce children to science in a fun and engaging manner. If you would like to help with this endeavor, please send a donation to the Museum's Discovery Room Fund. All gifts are greatly appreciated and will be used to support our children's education program.

Geology Displays Moved

by Steven D. Sroka

In keeping with the Museum of Natural History's long range plan of thematic exhibits, all of the geology and paleontology exhibits and display specimens were moved to the north and west corridors of the second floor of the Natural History Building this past February. Museum staff and student helpers **Mario Lippy**, **Dan Nolan**, **Sook Heminthavong** and **Leonaitais Hoponoa** managed the move with the aid of a hydraulic lift and two dollies on loan from the Department of Geology. Meteorites and Green River fish displays had to be dismantled before moving, and were reassembled in the second floor west corridor.

Only two displays, the fossil amphibian *Eryops* and the Gilboa tree stump, had to be moved by the University's Operations and Maintenance personnel. The stump was moved by the U. of I. iron workers, using a pulley and chain system connected to an iron beam.

The move has been extremely successful and gives the geology/paleontology displays greater visibility and a direct connection with the other pre-existing geology displays on the second floor. In addition, spacing between cases has been increased and there is some expansion space for new exhibits. Available funds have allowed for refurbishment and updating of the Pleistocene mammal case and for a new dinosaur exhibit to be completed in the Fall of 1995.

THE MUSEUM OF NATURAL HISTORY WISHES TO THANK THE NEW BOARD OF TRUSTEES AND THIS YEAR'S VOLUNTEERS.

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Museum of Natural History
College of Liberal Arts and Sciences
University of Illinois at Urbana-Champaign
438 Natural History Building
1301 West Green Street
Urbana, Illinois 61801

Visiting the Museum of Natural History

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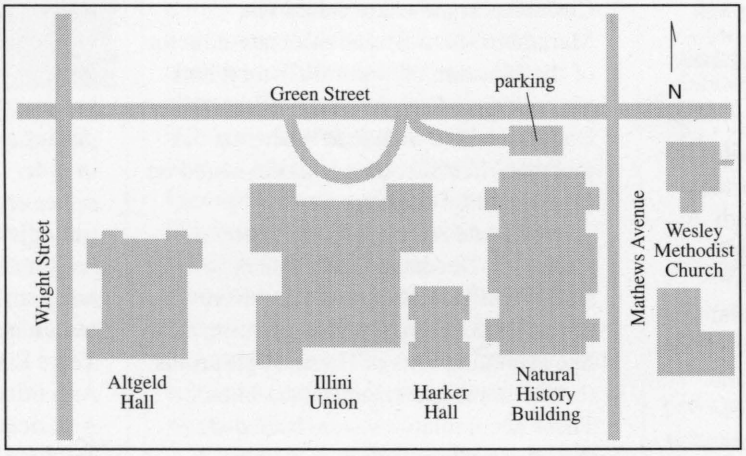

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MUSEUM OF NATURAL HISTORY

COLLEGE OF LIBERAL ARTS & SCIENCES • UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Volume 4, Number 1 *Winter 1996*

New Exhibit Opens: *Harvesting the Past*

by Andrew Fortier

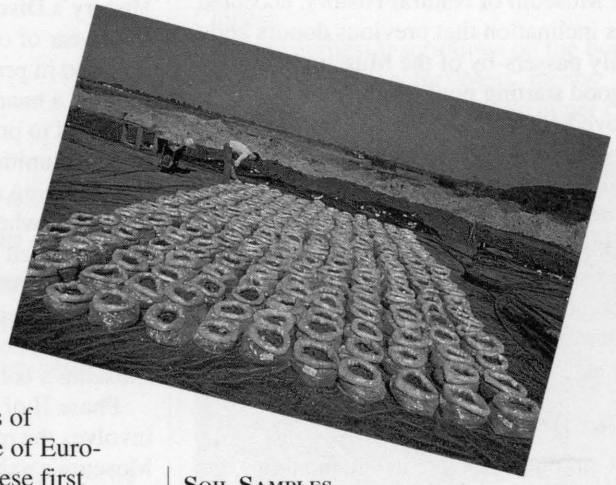
The Museum of Natural History would like to announce the opening of a new exhibition housed in the Fourth Floor Gallery, entitled ***Harvesting the Past***. The exhibition features Native North American horticultural practices and is divided into three parts: ***Gathering*** , ***Gardening*** and ***Farming*** . In addition, a fourth area, ***Recovery***, highlights how archaeologists find, process and identify prehistoric plant remains. The primary focus of the exhibit is on the evolving nature of plant usage leading up to corn agriculture, and on the specific tools that Native American Illinois groups adopted to cultivate, harvest, process and store plants.

BIRGER FIGURINE (A.D 1150). *FRONT VIEW.*
In the past, farming and the spiritual world were closely interconnected. This stone figurine, found near the Cahokia site in southern Illinois, depicts the Corn or Earth Mother, a symbol of crop fertility and life. She appears to be holding down the head of a serpent in one hand and cultivating its back (the earth) with a hoe. The tail of the serpent is transformed into a vine carrying a gourd or squash-like fruit.

Many of the gathering and gardening practices used by prehistoric communities in this state were practiced for thousands of years prior to the appearance of Euro-American settlers. In fact, these first European settlers in Illinois borrowed heavily from the extensive knowledge that Native Americans had accumulated over the centuries about wild as well as cultivated plants. Text, photographs and artifacts provide information about prehistoric plant use in Illinois and should be of interest to visitors of all ages.

In the exhibit are stone tools used for clearing forests, working wood, grinding nuts and seeds, and hoeing and planting. There are also examples of prehistoric ceramics used for cooking and storing plant materials, including a large fragment of one of the earliest ceramic vessels from Illinois. There are also brief accounts of the importance of tobacco plants and associated pipes, as well as a replica of the Birger figurine (shown here), which has been exhibited at several major American museums and has appeared in numerous publications.

Harvesting the Past was made possible through the cooperative efforts of many individuals. It was created and designed by an Illinois Transportation Archaeological Research Program (**ITARP**) team consisting of Graphic Designer **Linda Alexander,** Director **Thomas E. Emerson**, Staff Archaeologists **Andrew Fortier** and **Dale McElrath**, and Archaeobotanist **Mary Simon**. Supportive assistance was given by ITARP staffers Lab Supervisor **Eve Hargrave**, Publications Manager **Mike Lewis**, Production Assistant **Alicia Staples**, and Curator **Angela Steiner**.



SOIL SAMPLES DRYING. Most plant and animal remains from archaeological sites consist of very small pieces that require a special method of recovery and analysis. This process begins with site excavation, when archaeologists collect large samples of soil called *flotation samples*. Here soil samples are dried before processing.

Providing further support were Museum of Natural History Staff: Director **Douglas Brewer**, Curators **Ann Hutflies**, **Steven Sroka** and **Richard Vander Hoek** and Graduate Assistant **Mario Lippy**. The stands were created by **Richard Alexander** and the replications by **Larry Kinsella**.

One of ITARP's primary goals is the dissemination of information to both professional and public audiences. The program staff is active in public outreach, presents numerous talks at local schools and public service organizations, and produces educational materials such as slide shows, posters and displays utilizing their vast collection base.

Museum Board of Trustees Organized

by Paul Tenczar, President

Getting Started

"Since you have shown strong support for the Museum, I would like to take this opportunity to invite you to become a member of our Board of Trustees." All eleven patrons who received this offer last spring from Douglas Brewer, director of the Museum of Natural History, accepted. His inclination that previous donors and daily passers-by of the Museum would be a good starting pool for the new board proved correct! The board's first formal meeting was held in late April and included a private tour of the Museum, an in-depth discussion of its collections, activities and problems and the election of a president (myself). Since then, I have met individually with all the trustees in order to become acquainted and share ideas.

Who We Are

All but one of us live in Champaign County; the other near Chicago. We are all related —professionally, administratively or as alumni— to the University or the State Geological Survey. Most of us have spent our entire adult life working in the Champaign-Urbana community, and some were even born here. Many of us first visited the Museum forty, or even fifty years ago. We like the community and the Museum, and we are committed to supporting them!

First Order of Business

A mission statement for the Board of Trustees is our first order of business. Exactly what our collective "job" is may take some time to work out. Some of our responsibilities are obvious: 1) conveying the community's needs to the Museum's director; 2) providing ideas and advice for new exhibits; 3) assisting with fund raising; and 4) enlarging the board to better represent the entire community. Perhaps not so obvious are the "powers" of the board, but these will likely become established over time as we prove our worth to the University and the community.

Keeping the Good Things Going

The Board of Trustees gives universal support to several existing Museum activities: 1) the Discovery Room for children is a valuable community resource; 2) the incipient Museum Studies Certificate Program is a worthwhile endeavor for the training of future museum personnel; and 3) the existing collections and exhibits should be maintained, expanded and recognized as a vital resource of the University community.

Plenty of New Ideas

But we have plenty of new ideas, too. For instance, how can we get the newer scientific disciplines (e.g., microbiology, artificial intelligence) involved in the Museum to keep exhibits up to date? How do we acquire modern facilities and adequate parking for the Museum? How can we better connect to the other natural history oriented organizations in the community? How do we attain wider publicity, more involvement from the local community and more support from the University and its departments?

How do we get from here to there? We don't know . . . but we are working at it!

From the Director

The Museum of Natural History is committed to educational excellence and recognizes the importance of its role in the education of the community; to that end the staff is currently engaged in revitalizing the Museum's educational programming.

Phase I of this endeavor was the establishment of the Museum of Natural History's **Discovery Room**, now in its third year of operation. As we have reported in previous newsletters, this room is a hands-on, educational exhibit designed to provide visitors with a variety of opportunities to use all of their senses in examining and learning about artifacts found elsewhere in the museum. Activities include touch boxes, discovery boxes organized around various subjects (some with worksheets, puzzles and/or games), and displays of objects pertaining to the Museum's collections.

Phase II of our education program involves the modernization of the Museum's exhibits. Reorganization of the displays was undertaken last spring to present information more thematically. In addition, two new displays have been completed and are currently open to the public. **"The Crockerland Expedition, Life in Arctic Greenland: 1913-17"** documents an historic expedition to the Polar Region that was funded in part by the University of Illinois. This exhibition makes use of the expedition's journals, photographs and collected artifacts to provide visitors insight into traditional Inuit culture. A second exhibition, **"Harvesting the Past,"** made possible through the cooperation of the Anthropology Department's Illinois Transportation Research Program, deals with pre-historic Native American horticulture. Three new exhibits are planned for completion during this academic year: a new paleontological display showcasing actual dinosaur specimens that were excavated this past summer by a Museum staff member; a traveling exhibit based on the historical Zimmerman site; and a Southwestern (U.S.) Native American exhibit which will be presented by the Museum Studies Class (Anthropology 391).

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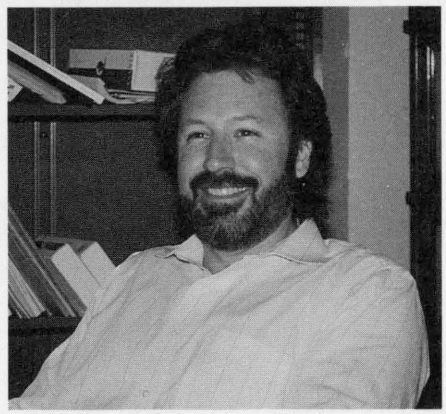


Douglas Brewer

Establishing a Museum Studies Certificate Program is Phase III of our education program. We are mid-way through the pilot course, which we plan to use as a model for our proposed four semester program. The first class of certificate candidates is planned for fall '96.

Rubbing (full view) from Han Dynasty (ca. 100 BC) wall from Xian, China. (Close-up view, below)

An Interpretation of a Han dynasty Relief

Of Flying Dragons & Dancing Birds

by Rui Wang

I recently presented Museum Director Douglas Brewer with a charcoal rubbing of a relief from a Han dynasty (ca.100 BC) wall from my hometown of Xian, China. Depicted in the rubbing are several birds (phoenixes) and a double-headed snake (dragon). When asked about the symbolism, I supplied the following explanation and interpretation based upon my research on the early cultures of China.

The Dragon and the Phoenix are two very important and ancient symbols of the Chinese culture. During the Paleolithic period, the Dragon and the Phoenix appear to be totem symbols for two major tribes in eastern China. But during the Neolithic period, some of the dragon-worshipping tribes — particularly those living in the Yellow River valley — changed their totem symbol from the Dragon to the Fish. This change of totems may be seen as a reflection by the primitive consciousness of the adaptive change in subsistence from nomadic hunting-gathering in northern China to the sedentary farming and fishing in central China. Also during the Neolithic period, figures of human-headed snakes (dragons), fish and birds began appearing on decorated pottery. These composite figures are portrayed as singing and dancing groups, not as individuals, and may be interpreted as the earliest totem worshipping rituals of the Han Chinese.

In the earliest inscriptions on the bones of turtles, the character "Men" means "Universe" when written in the upper case

(capitalized). This symbol is usually referred to as the supreme logos of the natural world in the earliest Han Chinese cosmology and the natural philosophy of Confucianism. (The natural philosophy of Confucianism focuses on the harmonious relationship between humans and the environment, while its ethical philosophy concentrates on how individuals should behave to comply with institutions of human society.)

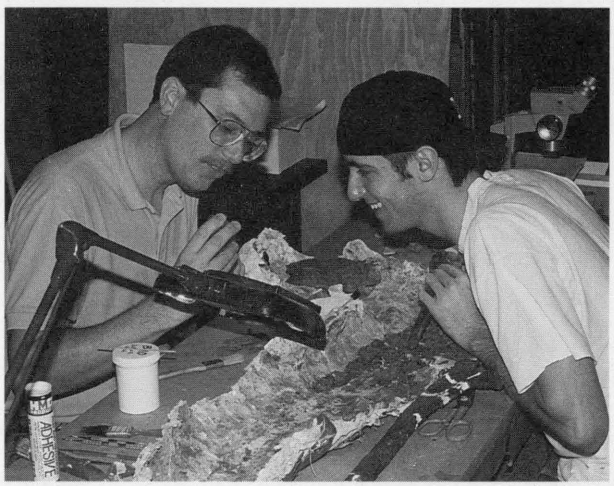
In summary, I believe that the two major themes of Han Chinese culture — the harmonious relationship of humans with the natural environment and of individuals with society which are vividly expressed by the similarity of the characters "Men" and "Universe" and are elucidated in the philosophies of Confucianism —are symbolized by the Dragon and the Phoenix and can be traced back to the singing and dancing human-headed animals of the Neolithic period and even to the totem symbols of the Paleolithic period.

First U. of I. Dinosaur-Collecting Expedition

This past summer the Museum of Natural History partially funded an expedition to collect dinosaur fossils for a new exhibit. Two scientists, **Russ Jacobson** (Illinois State Geological Survey) and **Steve Sroka** (U. of I. Museum of Natural History), jointly led a team of 14 enthusiastic volunteers from July 10-14 to collect dinosaurs and other fossils from the Hell Creek Formation (Upper Cretaceous–65 million years ago) of northwestern South Dakota. The expedition was the first of its kind in the history of the University of Illinois at Urbana-Champaign. Several scientifically significant specimens were recovered.

The team worked diligently to recover what they could in the five days allotted for the expedition—while braving several days of over 100 degree heat! Participants excavated the partial remains of a hadrosaur (duckbill) dinosaur and other fossils on a private ranch near Lemmon, South Dakota. The hadrosaur remains include a femur, several ribs with articulated vertebrae, a partial lower jaw and other isolated skeletal elements.

The team also found abundant turtle remains, including one individual nearly 80% complete. This exceptional turtle may actually be a new species. In addition, the team collected crocodile remains, bones of other small vertebrates, a few invertebrates and a large number of well-preserved plant fossils.



Steve Sroka (left) and Mario Lippy cleaning and consolidating recovered dinosaur bones.

Possibly the most exciting find of the expedition was the recovery of a *Tyrannosaurus rex* tooth found by the rancher's daughter near other bones that may be the remains of a complete *Tyrannosaurus*! However, because these beasts shed their teeth quite often, the recovered tooth may be an isolated tooth shed near the remains of some dinosaur on which the tyrannosaurid was feeding. Several more field seasons will be needed to determine exactly what is present near where the tooth was found.

> ***Possibly the most exciting find of the expedition was the recovery of a* Tyrannosaurus rex *tooth.***

Another exciting and unexpected find is a portion of the skull cap of a pachycephalosaurid, the so-called "dome-headed dinosaur." This specimen was collected on the last day of the expedition while the team was doing reconnaissance of other portions of the ranch. It was found near several vertebrae and other dinosaurian skeletal elements. This site will be revisited next summer when the expedition returns to see if more of the pachycephalosaurid is present.

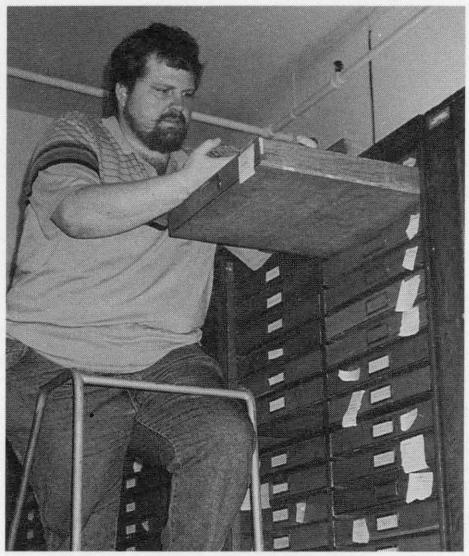
Currently, the fossil material is being prepared and identified by Sroka and Jacobson, with the help of **Laura Brandon** (collections volunteer) and **Mario Lippy** (museum assistant). In addition, Sroka and Jacobson are working on a new dinosaur exhibit which will be mounted in the Second Floor Gallery with the Museum's other geological and paleontological displays. This new exhibit will focus on dinosaur classification and evolutionary history as well as the excavation techniques employed in the Hell Creek expedition, and will include specimens recovered during the 1995 expedition.

Museum Hires Two New Staff Members

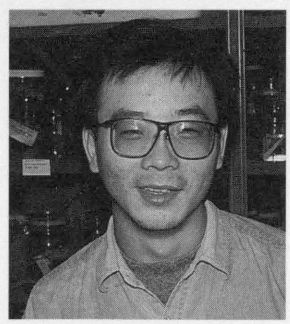
by Ann Hutflies

This fall, two more University of Illinois graduate students have joined the staff of the Museum of Natural History: **John Werner** and **Rui Wang**.

Werner comes to the Museum from the Department of Geology, where he has worked as a teaching assistant for the past five years. A Ph. D. student under the direction of Professor Daniel Blake, Werner's research interests include quantitative aspects of microevolution (changes within species through time and the formation of new species) in pectinoid bivalves (scallops). Werner is currently in charge of reorganizing the Museum's mollusk collection.



John Werner



Rui Wang

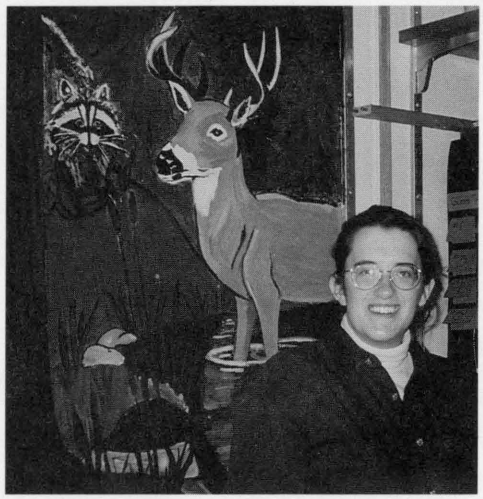
Wang, from the People's Republic of China, is a first year graduate student in the Department of Anthropology. His advisor is Professor Douglas Brewer, and his research interests include the evolution of modern Han culture from Neolithic and Paleolithic cultures, as well as the comparative study of Eastern and Western classical cultures. Wang has been busy at the Museum maintaining the herpetology collection and assisting fellow curator Werner.

Discovery Room Update

With the fall semester came the task of recruiting docents to staff the Discovery Room, the Museum of Natural History's hands-on exhibition for children. Current manager **Beth Watkins**, through fliers, notices in departmental newsletters and word of mouth, recruited and trained a staff of 20 student volunteers. This semester's docents are both undergrads and graduate students from a variety of academic fields (including the physical and social sciences, history, education, social work, business, engineering and library science).

Volunteer recruiting and training continue on an ongoing basis. In addition, members of the Department of Anthropology's Topics in Museum Studies course are assisting in the Discovery Room as an introduction to some aspects of museum education as it is carried out in the Museum of Natural History.

Discovery Room staff continue to improve the physical environment and contents of the room. The mural begun last year by two docents, featuring six panels depicting different ecosystems, is now nearing completion thanks to second-year docent **Carrie Donovan** (sophomore, anthropology). Other additions include new posters and a colorful floor rug pieced together out of donated carpet remnants by Carpet Land USA. Second-year docent **Melsie Mina** ('95) is designing a display on the solar system that may incorporate question-and-answer fact cards and a mobile of models of the planets. To complement the new Illinois Transportation Archaeological Research Program (ITARP) exhibit, "Harvesting the Past," plans are being made to install a working life-size model of a mortar and pestle with which visitors may grind grain and seeds in the manner of the prehistoric Native Americans. In addition, a new Discovery Room activity box is being created that will deal with prehistoric Native American lifeways and will incorporate educational material from the ITARP exhibit.



Discovery Room Manager Beth Watkins

Visitors may grind grain and seeds in the manner of the prehistoric Native Americans.

The major project of the semester is the creation of a site for the Museum of Natural History on the World Wide Web. First-year docent **Ron Blum** (graduate, psychology) and Trustee **Richard Cahill**, along with Manager Beth Watkins, are developing the Web page using an IBM PC donated by the **Computer Teaching Corporation**. The Web site will contain basic information about the Museum, a general guide to the collections, a description of the Discovery Room and the Museum's most recent newsletter; future additions will include detailed descriptions of the Museum's research collections and on-line educational material for use by schools.

Museum's Mollusk Collection Is Reorganized

To increase the accessibility of the Museum of Natural History's mollusks, the malacology collection is currently receiving a major overhaul. In addition to reorganizing the collections systematically so that closely related species are grouped together, new Graduate Curator **John Werner** has been updating obsolete taxonomy and providing new species-level identifications for mollusks in the collections that are unidentified or misidentified. This work is important because the compilation of detailed, well-organized collections in the biological sciences remains one of the best ways to document environmental change. Because of the comprehensiveness and age of the malacology collection, it is an invaluable resource for researchers with interests in evolution and systematics.

One of the Museum's largest research collections, the malacology collection is comprised of approximately 50,000 mollusk specimens, including representatives of several species that are endangered or extinct. Approximately 15,000 specimens are freshwater mussels, a diverse group of bivalves (mollusks such as clams, oysters, and scallops, which have a two-piece shell) that has been abundant historically in the streams, rivers and lakes of Illinois and the rest of the eastern United States. However, with the increasing influx of sediment and chemical toxins into these waters, both numbers of individuals and numbers of species have steadily fallen. In addition, local populations have been harvested in the past for the production of buttons (made from the pearly, iridescent inner layer of the shells, which is a form of the mineral aragonite called *nacre*). More recently, they have been harvested for the production of pearls (small pieces of mussel shell are used to irritate pearl oysters and induce them to surround the shell chips with concentric spherical layers of nacre). As a result, many freshwater mussel species recently have become federally or locally endangered. Concurrent with across-the-board decline, the large number of species which require clear waters (such as the "rabbit's foot," *Quadrula cylindrica*) are being steadily replaced by the members of a few species that have adapted to the increasingly poor water quality (such as the three-ridge, *Amblema plicata*).

The Museum would like to thank the following University students who volunteered their time this semester as Discovery Room docents:

Daniel Barnstable
Ron Blum
Kim Buhlig
Eleanor Dayrit
Denise DeBrock
Kim DeMarino
Göknil Demir
Carrie Donovan
Anne Estandarte
Christina Hirn
Michele Jensen
Melsie Mina
Kate Nelson
Helga Ocampo
Amy Peterson
Maria Sanchez
Shannon Sankstone
Tamara Starke
Kristin St. John
Sarah Tavine
Mieke Vaughn

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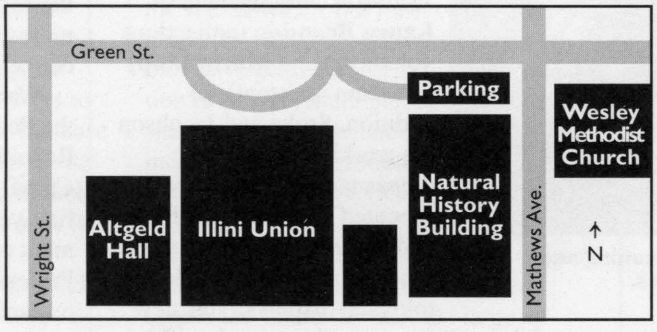

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